Addressing Nutritional Needs in High-Risk Populations through Innovative Public and Private Collaboration
TODAY’S SPEAKERS

Tim Conroy
National VP, Government and Healthcare Partnerships, Mom’s Meals

Tim is responsible for overseeing long-term services and support waiver benefit programs and helping customers and clients access state benefit programs for home-delivered meals. He partners with executive management teams at managed care organizations, local Area Agencies on Aging and community-based organizations to ensure the continuation of partnerships to support member services. Additionally Tim works on advocacy issues with state and federal government programs to expand innovation around SDOH and health equity programs.

Dara Hall, MSN, RNC-NIC
Maternal Child Health Clinical Lead
Delaware Health and Social Services - Division of Medicaid and Medical Assistance

Dara is a registered nurse and the Maternal Child Health Clinical Lead of the Division of Medicaid and Medical Assistance (DMMA) for the Delaware Department of Health and Social Services. She oversees clinical and quality outcomes of maternal and child health within DMMA, participates in statewide efforts to address maternal and child health, and has worked to implement and oversee special projects, including a postpartum, food box delivery program. She is passionate about strengthening the mother-infant dyad and improving outcomes through increasing access and addressing social determinants of health.
ABOUT MOM’S MEALS

Only national provider of refrigerated, medically tailored, home-delivered meals

2,100+ employees; leaders with deep experience in food and healthcare industry

20+ Years in Healthcare
• Medicaid LTSS/HCBS Waivers
• Managed Medicaid
• Medicare Advantage
• Dual Eligibles/DSNPs
• Hospitals & Health Systems
• Government Programs
• AAAs
• Private Pay

Programs
• Long-Term Services and Support
• Post-Discharge Care
• Chronic Care Management

50M+ meals delivered annually to all 50 states and U.S. territories
Mission Statement: To improve the quality of life for Delaware’s citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations.

Vision Statement: Together we provide quality services as we create a better future for the people of Delaware.

Priorities
- Maximize Personal and Family Independence
- Be a self-correcting organization working to retool to keep pace with changing client needs and a changing service delivery environment

Goals
- DHSS will be customer service focused.
- DHSS will be driven by a shared vision.
- DHSS will communicate effectively, both internally and externally.
- DHSS will live its Beliefs and Principles and Management Principles.
- DHSS will function as an integrated organization which partners with outside organizations to improve the quality of services provided to our clients.
Survey respondents reporting higher inpatient (IP) or emergency room (ER) utilization were more likely to report unmet social needs.

UNMET SOCIAL NEEDS EXIST ACROSS PAYER TYPES

Nearly half of the surveyed population reported at least one unmet social need, including 44% of respondents with employer-sponsored group insurance.

THE BUSINESS CASE FOR SDOH

<table>
<thead>
<tr>
<th>Cost of Care</th>
<th>Non-Medical Models</th>
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<tbody>
<tr>
<td>The number of deaths attributable to social factors in the U.S. are comparable to the number attributed to pathophysiological and behavioral causes.(^1)</td>
<td>• Countries that spend more on social services, such as family/child supports, disability, unemployment and housing relative to their gross domestic product have significantly better population health outcomes.(^3)</td>
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<td>Estimated cost of U.S. healthcare inequities from 2003–2006(^2):</td>
<td>• Assessing patients and members in a more holistic way can lead to significant improvements in health and wellbeing, as well as costs savings.</td>
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<tr>
<td>• Estimated combined costs of health inequalities &amp; premature death = $1.24 trillion</td>
<td>• SDOH are becoming as important as medical record information.</td>
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<tr>
<td>• Annual loss to the U.S. economy = $309 billion</td>
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<td>• Eliminating minority disparities would reduce direct medical costs by $229 billion for 2003-2006.</td>
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</table>


\(^3\)Shrank, Keyes & Lovelace. Redistributing Investment in Health and Social Services – The Evolving Role of Managed Care. 2018. JAMA.
PATHWAYS FOR ADDRESSING SDOH: MEDICAID

Medicaid Options

• Benefit
• Waivers: 1115, 1135(b), 1915(c)
• Administrative dollars

Issues

• Multiple paths to providing benefits create confusion
### WHAT’S NEEDED TODAY AND TOMORROW?

#### Today

- **Product advocate** who knows the policy pathways
- **Data** to ID members who can benefit from SDOH support
  - HRA
  - Case Management System
- **Case Management Team**
  - Awareness of Benefit
  - Access to the Benefit
  - Advocate to use the Benefit

#### Tomorrow

- Allocated budget
- Policy clarity
- Incentives
- Measurement
- Provider awareness z-codes
- Member awareness
People with chronic conditions who received condition-appropriate home-delivered meals for an average of 12 months (median 9 months) had **16% lower health care costs** compared to matched controls.

- $3,838 vs. $4,591 difference in monthly cost of care
- $712/month savings in IP and SNF – majority of savings
- ED visits were not measured

Impact of medically tailored meals delivered weekly to members at nutritional risk (weight change, food insecure, chronic conditions) for six months.

Results only for medically tailored meal programs.

Source: Seth A. Berkowitz, Jean Terranova, Caterina Hill, Toyin Ajay, Todd Linsky; Meal Delivery Programs Reduce the Use of Costly Health Care in Dually Eligible Medicare and Medicaid Beneficiaries, Health Affairs, Vol. 37, No. 4, April 2018.
PILOT: CHRONIC CONDITIONS
### Background

- Without adequate nutrition, individuals with chronic conditions may struggle with condition self-management, which ultimately affects a higher overall medical spend to care for those members.\(^1\)
- Food insecurity and food insufficiency lead to poor nutritional status and low medication adherence, which contribute to poor clinical outcomes.
- By improving engagement in care and medication adherence, medically tailored meals can help to improve the effectiveness of treatment plans by providers and care managers.

### Objective & Expected Outcomes

- **Objective**
  To improve chronic care management and lower the cost of care for plan members through a 13-week home-delivered meals intervention

- **Expected Outcomes**
  - Reduction in total medical spend as measured by medical claims
  - Increased medication adherence as measured by pharmacy claims

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High-risk, chronically ill UPMC for You members with:
• Multiple co-morbidities
• Nutrition-sensitive condition(s)
• Psychosocial needs

The pilot targeted members enrolled in the UPMC Community Health Worker (CHW) Impact Program or Community Team Program who did not need housing assistance.

CHWs and care managers determined eligibility based on:
• Food insecurity
• Household size
• Meal prep equipment (refrigerator and/or microwave oven)
Enrollees had a history of a high condition-based medical spend. Each member had at least one of the following conditions:

- Diabetes
- Asthma
- Coronary Artery Disease
- Heart Failure
- Chronic Obstructive Pulmonary Disease (COPD)
- Severe Persistent Mental Illness (SPMI)
- Substance Abuse Disorder

**3 meals/day for 13 weeks**

Enrollees received weekly deliveries of fully prepared, condition-appropriate, refrigerated meals during a 3-month timeframe between October 2019 and June 2020.
UPMC & MOM’S MEALS’ PILOT—MAIN MEASURES

Main Measures

Claims data for enrollees were evaluated against a comparison group of members who met SDOH food insecurity criteria. The equated sample was selected based on eligibility month, age, gender, residence and co-morbidity using propensity scores.

Engagement remained high—74 enrollees (74%) received meals for 13 weeks.

- To account for a decrease in utilization due to COVID-19, change in cost and utilization for members receiving meals were compared to similar members not receiving meals.
- Due to small sample size, distribution and COVID-19, a nonparametric statistical analysis was conducted.
  - Total cost of care
  - Medical costs
  - Pharmacy costs
  - Average change in ED utilization
PILOT OUTCOMES SHOW A POSITIVE TREND IN FINANCIAL RETURN

<table>
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<tr>
<th>TOTAL COST OF CARE</th>
<th>ED UTILIZATION</th>
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<tr>
<td><strong>19%</strong> <strong>DIFFERENCE</strong></td>
<td><strong>14%</strong> <strong>DIFFERENCE</strong></td>
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<tr>
<td>36% DECREASE in median total cost of care for 6 months post meals</td>
<td>31% DECREASE in ED utilization for 6 months post meals</td>
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<tr>
<td>vs.</td>
<td>vs.</td>
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<td>18% DECREASE in comparison group</td>
<td>17% DECREASE in comparison group</td>
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INSIGHTS

Individuals who received meals had a 19% total cost of care reduction, largely driven by a decrease in ED utilization.

- 19% TCOC on top of COVID-19 decrease in utilizations, as displayed in analysis
- Total cost of care decrease support return on investment for meal delivery

The largest ED reduction was identified among members with a diagnosis of SPMI.

- Non-emergent ED utilization drivers are NOT medical
- Facilitating basic needs contributes to tangible cost savings

Pilot displays promising results in cost containment and reduction in avoidable unplanned care.

- Larger population/longer post meal time frame – path to statistical significance
- Supports research that SDOH investment reduces medical costs
- Unmet biopsychosocial needs contribute to medical costs/unplanned care
- Start-up investment; longitudinal payback
PILOT PROGRAM:
DIABETES
COLLABORATION WITH AMERIHEALTH CARITAS DC

Chronic Care Meals Program for Members with Diabetes

• AmeriHealth Caritas DC contracted with Mom’s Meals to provide in-home delivery of condition-appropriate meals to select members where nutrition has the potential to positively impact their condition.

• Members in this program included those with:
  – Pre-diabetes
  – Uncontrolled diabetes
  – Gestational diabetes or hypertension
  – Designated conditions following an inpatient stay

• Those with pre-diabetes and uncontrolled diabetes were enrolled for 90 days.

• Those with gestational diabetes or hypertension were enrolled for the duration of their pregnancy plus 2 weeks following delivery.

• Each week, participants received up to 21 specially packaged ready-to-eat meals.
EARLY RESULTS: CHRONIC CARE PILOT

Among Members with Pre-Diabetes, Uncontrolled Diabetes, Gestational Diabetes or Hypertension, or Designated Conditions After Hospital Stay

Decline in A1c Levels:
• Average: .25 point (3.1%)
• Range: 1.2 to +0.1 points (-9.3% to 0.8%)

Weight Loss:
• Average: 3.9 pounds (1.4%)
• Range: 16 pounds to + 6.4 pounds (5.6% to + 3.8%)

66 participants with diabetes or pre-diabetes; 22 with complete pre- and post-data; about 2/3 female
CHRONIC CARE PILOT: RETROSPECTIVE CLAIMS ANALYSIS

Among 392 Members

- **Members with 1 IP Visit within 30 Days**
  - Prior to receiving Mom’s Meals: 183
  - After receiving Mom’s Meals: 53
  - Reduction: 66%

- **Average Inpatient Days per Member**
  - Prior to receiving Mom’s Meals: 14
  - After receiving Mom’s Meals: 5
  - Reduction: 64%
PILOT PROGRAM: RENAL HEALTH
HDM AND RENAL PATIENTS

Researchers From the University of Illinois Urbana-Champaign with Grant Support From the Renal Research Institute

Challenge

- Patients with kidney failure on hemodialysis (HD) have significant dietary restrictions, including reduced sodium intake.
- Behavioral counseling is rarely effective.
- Many patients live in a “high-sodium food environment” and may have barriers to dietary and behavioral changes.

Question

- Can home-delivered meals help support reduction in dietary sodium to drive clinical impact and help meet health goals?
Participants followed a usual (control) diet for the first 4 weeks followed by 4 weeks of 3 low-sodium, home-delivered meals per day. Meals had <700 mg sodium each (<2,000 mg total sodium per day) and were low in potassium and phosphorus.
Significant reduction in interdialytic weight gain (IDWG)

Reduction in sodium intake

Reduced thirst (-23%) and dry mouth (-25%) scores

Reduced plasma phosphorus

Reduction in volume overload

Reduction in systolic blood pressure

In summary, home delivery of low-sodium, kidney-friendly meals is a feasible short-term approach to reduce sodium intake, thirst, dry mouth, IDWG, blood pressure, plasma phosphorus, and volume overload in HD patients.


CONVENIENCE OF HDM HELPED DRIVE RESULTS

Overall, participants reported eating an average of 66 out of 84 meals provided, which translated to approximately 2.4 meals per day eaten, for overall average adherence rate of 79%.

4 Most Common Feedback Themes Provided by Participants

- 80% “helped with not cooking and shopping”
- 75% “liked the different meal options and taste”
- 40% “helped with thirst, fluid intake, and/or fluid gain”
- 30% “helped with busy work or life schedule”
PARTNERSHIP PILOTS SHOW STRONG EARLY RESULTS

<table>
<thead>
<tr>
<th>Long Term &amp; Chronic Care</th>
<th>Diabetes</th>
<th>Heart Failure</th>
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<tr>
<td></td>
<td>AmeriHealth Caritas District of Columbia</td>
<td>VA U.S. Department of Veterans Affairs</td>
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<td></td>
<td>AgeOptions</td>
<td>Healthcare Institute for Re-engineering Practice</td>
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<td></td>
<td>ILLINOIS</td>
<td>Vanderbilt University</td>
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<td>CareMore Health</td>
<td>National Institutes of Health</td>
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<th>Post-Discharge</th>
<th>Heart Failure</th>
<th>Heart Failure</th>
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<tr>
<td></td>
<td>Medical School of Michigan</td>
<td>NIH National Institutes of Health</td>
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<td></td>
<td>Stony Brook School of Medicine</td>
<td>National Institutes of Health</td>
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<td></td>
<td>BayCare</td>
<td>California Department of Public Health</td>
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<thead>
<tr>
<th>Diabetes</th>
<th>Heart Failure</th>
<th>Food Insecurity</th>
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<tr>
<td>Renal</td>
<td>Renal</td>
<td>Renal</td>
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POSTPARTUM FOOD BOX PARTNERSHIP PROGRAM

“Food Box Delivery after Delivery”

Dara Hall, MSN - DMMA
Food insecurity – lack of consistent access to sufficient food

Food insecurity disproportionately impacts:
- Female-headed households
- Households at or below FPL
- Households with children <6
- Individuals of color

Food insecurity exacerbated by COVID-19 pandemic in Delaware & the US

Food insecurity not often disclosed due to social stigma
IMPACT

- Food insecurity has impacts for maternal-infant dyad
  - Increased risk for major depression & general anxiety disorder
  - Increase risk of postpartum depression (PPD)
  - Decrease rates of breastfeeding
- Food insecurity increase risk of contracting COVID-19
  - Food insecurity = forced to obtain food in person
  - Long waits at crowded food pantries – increased exposure
- Food insecurity does not occur in isolation from other SDOH
RESPONSE

- Developed a Postpartum Food Box Delivery program
- Partnership between
  - Division of Medicaid and Medical Assistance (DMMA)
  - Food Bank of Delaware
  - ModivCare
  - Amerihealth Caritas and Highmark Health Options, the Medicaid managed care organizations (MCOs)
PROCESS

- Members notified of program through hospitals, community programs, providers, and MCOs
  - Members had choice of 2 box options
  - Variety of shelf-stable food
  - Deliveries Tuesday & Thursdays
- Members called their MCO to set up deliveries
- MCOs shared delivery information with Modivcare
- ModivCare coordinated food box orders with Food Bank
• Partnership meeting October 2020
• Finalization of roles & responsibilities December 2020
• Implemented c-section pilot February 2021
• Expanded to all postpartum members July 2021
## ROLES & RESPONSIBILITIES

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<tr>
<th>MCOs</th>
<th>ModivCare</th>
<th>Food Bank</th>
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<tr>
<td>Receive incoming calls from members.</td>
<td>Contact members on report to schedule delivery date &amp; verify information</td>
<td>Make food boxes according to Modivcare orders</td>
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<tr>
<td>Provide email to Modivcare daily on member interest, boxes requested, box options, delivery dates</td>
<td>Email Food Bank prior to pick-up with information on box types and pick-up locations</td>
<td>Provide boxes at location for drivers (2 locations in state)</td>
</tr>
<tr>
<td>Make scheduled deliveries</td>
<td>Make scheduled deliveries</td>
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<tr>
<td>Return boxes that couldn’t be delivered</td>
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MEMBER FEEDBACK

Reduced burden with accessing food

Decreased stress with traveling outside home with newborn

Enhanced relationship with MCOs to address SDOH needs
PARTNERS FEEDBACK

- Program has helped to identify food insecurity
- Enhanced connection with members difficult to reach
- Ensure linkages to resources to address food insecurity long-term
LESSONS LEARNED

- Communication is key
  - Frequent & on-going
- Continue to amend and make changes
  - Flexibility & continued evaluation
- Clearly define roles & responsibilities
  - Establish prior to implementation but ensure flexibility
NEXT STEPS

Program funded through 2022

Identification of quantitative measures to assess impact
THANK YOU FOR ATTENDING

Tim Conroy
National VP, Government & Healthcare Partnerships
Mom’s Meals
Tim.Conroy@momsmeals.com
Direct: 470.316.4681

Dara Hall, MSN, RNC-NIC
Maternal Child Health Clinical Lead
Delaware Health and Social Services – Division of Medicaid and Medical Assistance
Dara.Hall@delaware.gov
Direct: 302.255.9647